SAN JOSE TO MERCED



California Society
of Professional
Engineers,
Monterey Bay
Chapter

Project Update

November 18, 2010



BACKGROUND

- State agency began in 1997
- Proposition 1A in 2008
- Environmental reviews
- Studies reflect input from the people





CALIFORNIA'S HIGH-SPEED TRAIN SYSTEM

Largest public infrastructure project in U.S. history

- 800-mile system (520 miles in phase one)
- Operating speeds: 110-125 mph in urban areas; 220 mph in rural areas
- 100% clean electric power
- Safely grade-separated
- Reliable, easy way to travel
- Environmentally responsible
- Creates jobs/ stimulates economy

California High-Speed Train Map, Statewide Overview







WHY WE NEED IT

Jobs

- 600,000 full-time, one-year, construction-related job-equivalents
- 5,000 permanent operations and maintenance jobs
- 450,000 economy-wide jobs by 2035

Mobility

 "Economic power is how fast you move people and goods around the state." Gov. Arnold Schwarzenegger, January 15, 2008.

Environment

- Reduced greenhouse gases
- AB 32: California's 2006 landmark legislation to reduce greenhouse gas emissions 25% by 2020





WHY WE NEED IT

Status quo is not an option

Population Growth

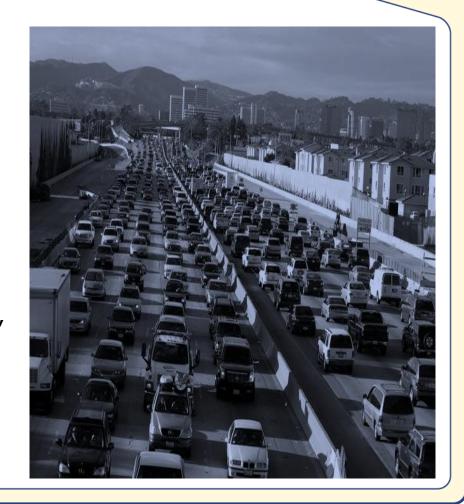
 California's population now: 38 million By 2035: 50 million

We can build...

 New freeways, airport runways and more departure gates to address our expected population growth

or

 800-mile high-speed train system, powered by 100% renewable electricity expected to be generated by clean wind and solar energy





MOMENTUM

In 2008 Californians passed Proposition 1A

\$9 billion bond measure – first state to pass funding in the nation

The Federal Government supports helping fund the system through the American Recovery & Reinvestment Act

- Federal grant awarded in January 2010, \$1.85 billion specifically for high-speed rail
- Largest award for high-speed train funding received by any state

Private sector interest

- Seeking \$10-12B through public-private partnerships (P3)
- Request for Expressions of Interest issued spring 2008
- Next: solicit preliminary comments on planned RFQ process in late 2010

International interest

MOUs to share expertise with China, France, Germany, Italy, Japan,
 Korea, Spain, Belgium and more.



WHERE WE ARE NOW

Transitioning from Planning to Implementation



Following a Nationwide Search
California High Speed Rail Authority
Names New CEO:

Roelof van Ark

- Senior executive and engineer with more than 30 years experience leading transportation companies
- President of Alstom Transportation Inc., makers of the fastest trains in the world and builders of Europe's TGV
- President of Aviation Security for Invision Technologies Inc.
- President/CEO of Siemens Transportation Systems
- Joined the High-Speed Rail Authority on June 1



WHERE WE ARE NOW

Transitioning from Planning to Implementation

Project-level EIR/EIS in process for all sections

- ✓ All sections have completed scoping and completed the analysis of alternative alignments or have it underway
- ✓ Receiving public input on alternative alignments
- ✓ September 2011-October 2012: Target dates for state and federal certification of all seven Phase 1 sections
- ✓ On track to meet requirements for ARRA funding



PHASE 1

- San Francisco-San Jose
- San Jose-Merced
- Merced-Fresno
- Fresno-Bakersfield
- Bakersfield-Palmdale
- Palmdale-Los Angeles
- Los Angeles-Anaheim





SUBSEQUENT SECTIONS AND ALTAMONT CORRIDOR

- Los Angeles-San Diego (via Inland Empire)
- Merced-Sacramento
- Altamont Corridor Rail Project





THE FIRST STEP TO A TRUE HSR SYSTEM BEGINNING IN THE CENTRAL VALLEY





PROGRAM STATUS ONE YEAR FROM NOW...?

CHSRA will have:

- Completed Final EIR/EIS documents + 15 percent design for selected ARRA section, awaiting execution of NOD/ROD
- Negotiated Cooperative Agreement with FRA to fund first design-build contract
- Ready to release RFPs to prospective teams for first DB contracts
- Prepared state appropriations request and financing plan for use of Prop 1A funds





NEXT STEPS

2012

 EIR/EIS process complete in all Phase 1 (Anaheim-Los Angeles-San Francisco) sections, construction start-up

2015

Begin testing the first prototype trainsets

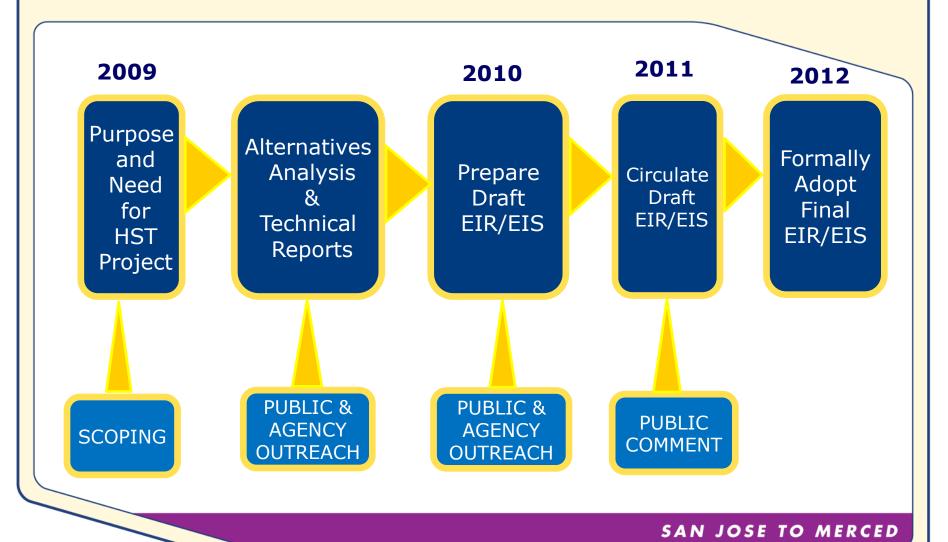
2018-20

 Launch operations on Anaheim-Los Angeles-San Francisco



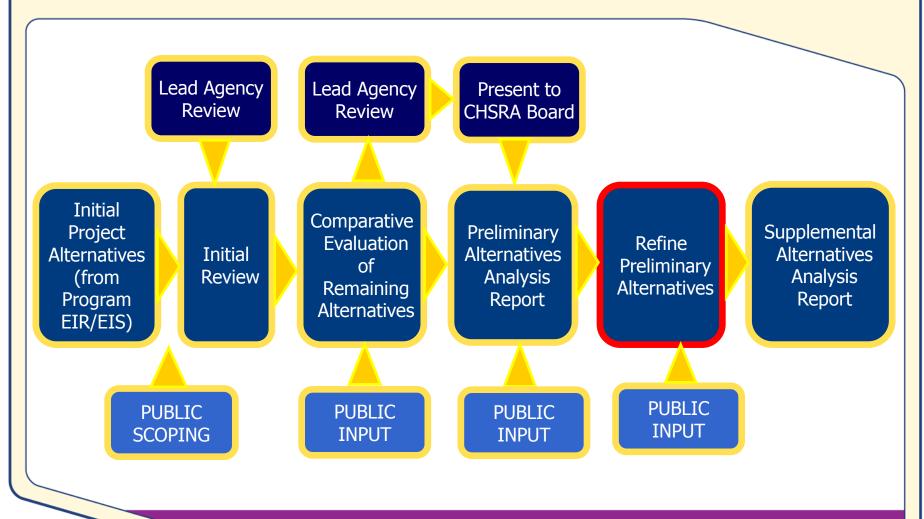


SAN JOSE-MERCED ENVIRONMENTAL REVIEW SCHEDULE





ALTERNATIVES ANALYSIS PROCESS





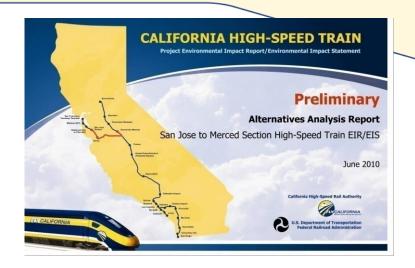


PRELIMINARY ALTERNATIVES ANALYSIS

Preliminary Alternatives
 Analysis posted at

www.cahighspeedrail.ca.gov

 Evaluated alignment & stations from scoping (Spring 2009 – Fall 2009)



- Initial presentation to Board December 3, 2009
- Preliminary AA includes input from Fall 2009-Spring 2010
- Technical Studies e.g., tunnel options in San Jose
- Extensive agency & public outreach

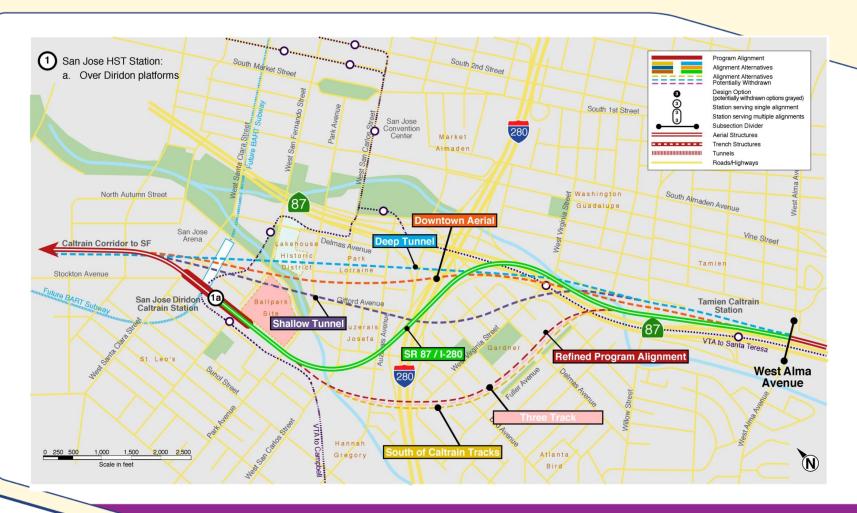


SUB-SECTIONS FOR EVALUATION





DOWNTOWN SAN JOSE SUB-SECTION



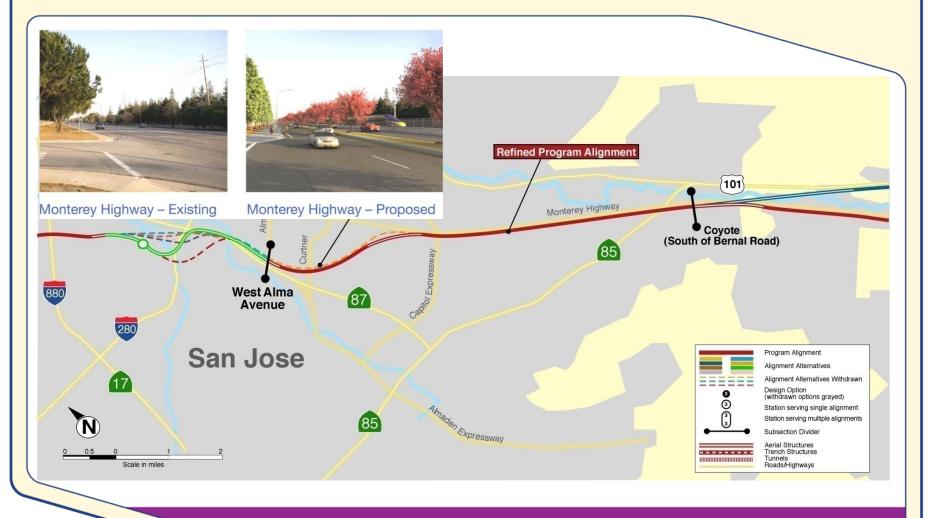


I-280/SR-87 ALIGNMENT SIMULATION





MONTEREY HIGHWAY SUB-SECTION







MORGAN HILL - GILROY SUB-SECTION





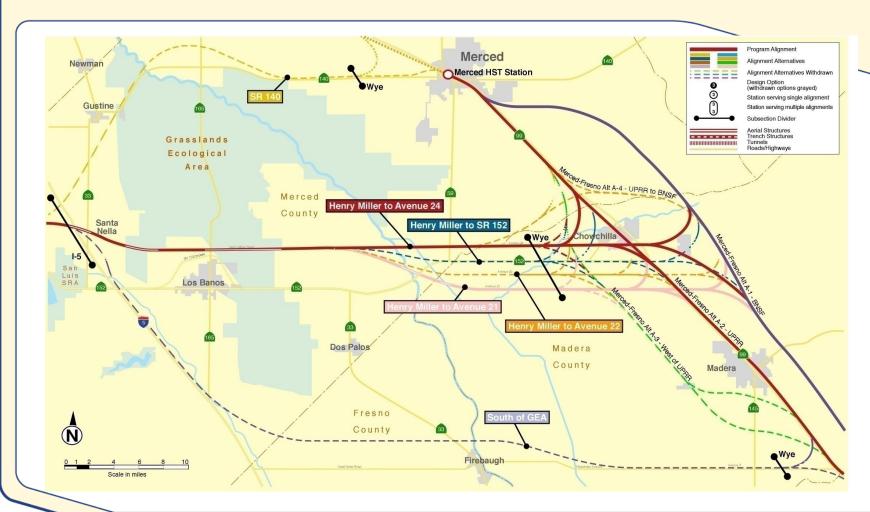
PACHECO PASS SUB-SECTION





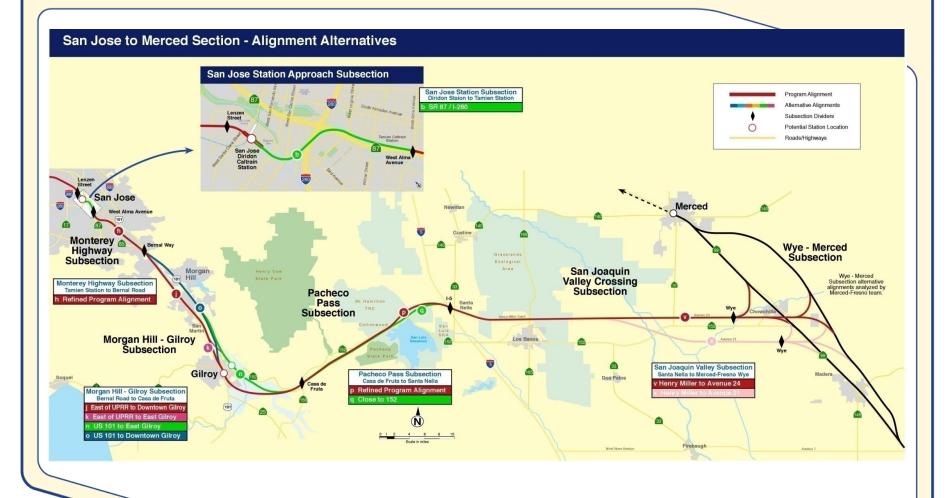


SAN JOAQUIN VALLEY CROSSING SUB-SECTION





ALIGNMENTS CARRIED FORWARD INTO DRAFT EIR/EIS







SOUND AND CALIFORNIA'S HIGH-SPEED TRAINS

- We understand that sound is a key concern.
- The Federal Railroad Administration has rigorous procedures to measure sound that the Authority will follow.
- The Authority will work with the public and partner agencies to consider ways to mitigate significant sound impacts.







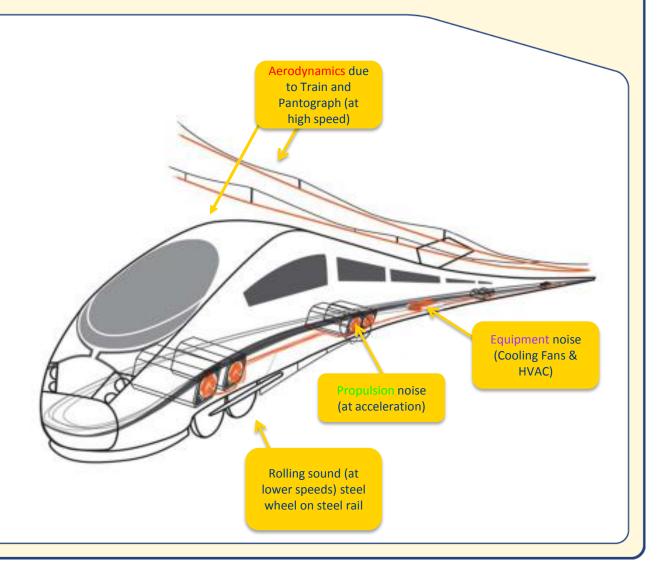
HIGH-SPEED TRAINS CREATE FOUR KINDS OF SOUND

Rolling – sound from the wheels as trains move along the tracks.

Propulsion – sound from motors and gears that make the train move.

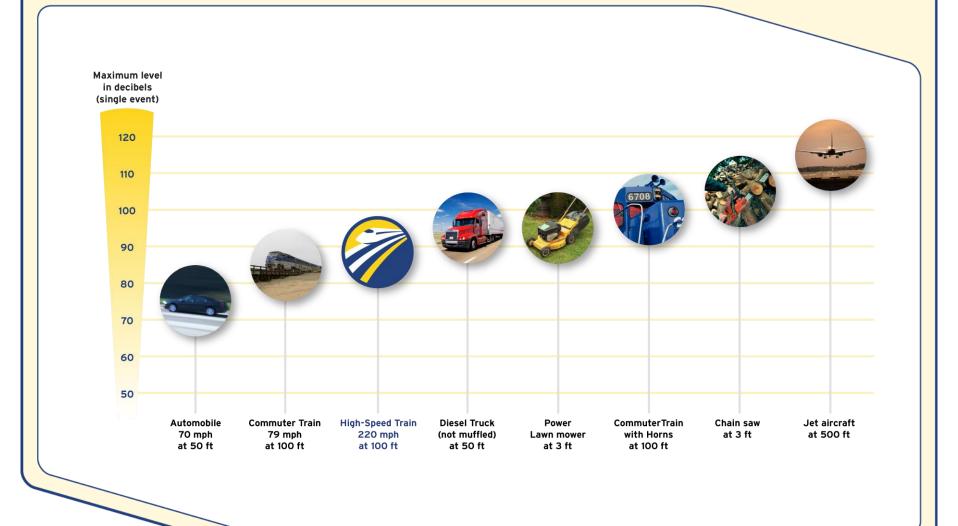
Equipment – sound from cooling fans and air conditioners.

Aerodynamics – sound from the flow of air moving past the train at high speed.





HOW DOES THE SOUND FROM HIGH-SPEED TRAINS MEASURE UP?





FAST TRAINS MAKE FOR SHORTER SOUNDS

A train moving at 220 mph – the top speed of California's high-speed trains – will be heard for about **four seconds**

By comparison....

A 50-car freight train traveling at 30 mph can be heard for **one minute**





COMMITMENT TO SOUND MITIGATION

Operations

- In major urban areas (Bay Area, Los Angeles and San Diego) high-speed trains will mostly run at speeds of **125 mph or less.**
- High-speed trains won't have scheduled passenger service between midnight and 5 a.m.
- Grade-separated system will eliminate the need for blaring horns.

Technology

- Newer high-speed trains quieter than earlier models and conventional trains
- Electrically powered, no noisy diesel engines





Rhine River Viaduct, Germany



SCNF High-Speed Train System, France



FUNDING

Projected overall construction cost: \$42.6 billion

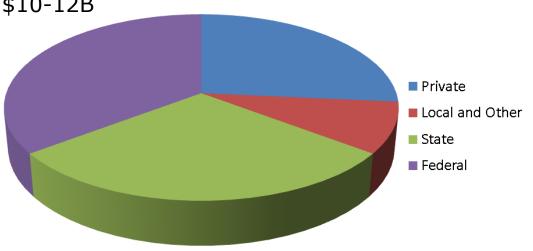
(Anticipated funding sources)

California Funding: \$9B

Federal Funding: \$17-19B

Local Funding: \$4-5B

Private Investment: \$10-12B





WHERE WE ARE NOW

Transitioning from Planning to Implementation



Federal Funding: a Key Component for Success

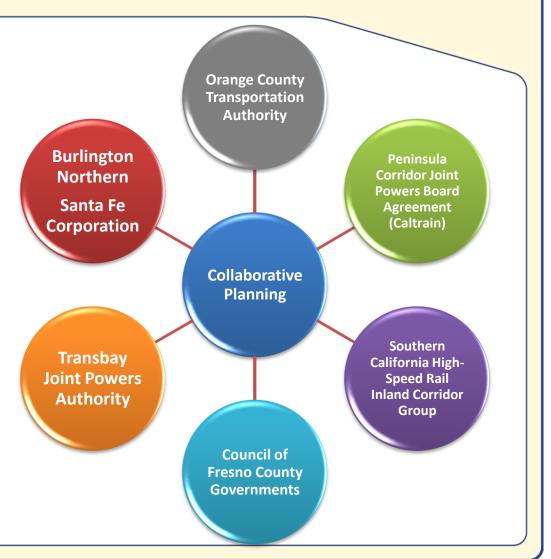
- FY 2010 High-Speed Intercity Passenger Rail Program granted of **\$715 million** awarded October 2010
- Completed American Recovery and Reinvestment Act (ARRA) grant of \$1.65 billion awarded in January 2010
- In Process 3 applications for Passenger Rail Investment and Improvement Act (PRIIA) grants submitted in mid-May, could provide as much as \$16.6 million. Expecting announcement before end of 2010.
- In development Innovative finance and loan programs that the Authority or a private investment concessionaire could use to reduce borrowing costs
- Investigating Ridership risk sharing structures, "investment grade" ridership forecast



WHERE WE ARE NOW

Transitioning from Planning to Implementation

Developing collaborative planning agreements with regional governments





SAN JOSE-MERCED NEXT STEPS

- Public & Agency Meetings on Alternatives Analysis
- Supplemental AA Early 2011
- 15% design March 2011
- Draft EIR/EIS August 2011
- Final EIR/EIS February 2012
- Record of Decision May 2012





PROJECT SCHEDULE

San Jose - Merced HST Section	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020
Right-of-Way													
EIR/EIS													
NOD / ROD Issued					\								
Procurement													
DB Infrastructure													
Systems / Electrification													
Test / Accept													
Revenue Service												\	



QUESTIONS/COMMENTS

Contact Us:

Website: http://www.cahighspeedrail.ca.gov

• **Phone:** 1-800-881-5799

Comments:

- Email: san.jose_merced@hsr.ca.gov
- Postal Mail:

California High-Speed Rail Authority

San Jose to Merced Section 925 L Street, Suite 1425 Sacramento, CA 95814

